AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) An optical device comprising:

a housing, the housing comprising:

a light source emitting light along an illuminating beam having a two-dimensional cross-sectional area;

a main objective; and

a spectral filter positioned between the light source and the main objective,

wherein the spectral filter is adapted to reduce, without eliminating, the intensity of the light emitted by the light source in a specific region, the specific region being a subsection of the two-dimensional cross-sectional area of the illuminating beam.

2. (Original) The device according to claim 1, wherein the reduction of the light intensity by the spectral filter is wavelength-dependent.

3. (Original) The device according to claim 1, wherein the reduction of the light intensity by the spectral filter is intensity-dependent.

4. (Original) The device according to claim 3, wherein the reduction of the light intensity by the spectral filter is also wavelength-dependent.

5. (Currently Amended) The device according to claim 1, wherein at least one region of the spectral filter ~~absorbs~~ is configured to absorb a portion of the intensity produced by a specific wavelength λ which is in a range selected from the group consisting of the wavelengths from 420 to 470 nm, wavelengths below 400 nm, wavelengths injurious to a human's retina, and wavelengths injurious to a human's cornea.

6. (Currently Amended) The device according to claim 2, wherein the spectral filter ~~absorbs~~ is configured to absorb a portion of the light being transmitted by the light source having at least one wavelength, and wherein for each wavelength, a portion of which is absorbed, absorption edges are defined between the specific region and the remainder of the cross-sectional area of the illuminating beam.

7. (Original) The device according to claim 6, wherein the absorption edges of at least one of the reduced-light intensity wavelengths are flat.

8. (Original) The device according to claim 1, wherein the spectral filter has a profile that has reduced-light intensity wavelength regions which vary from a central portion of the spectral filter to an outer rim of the spectral filter.

9. (Original) The device according to claim 8, wherein in the central portion, the intensity of wavelengths between 420 nm and 470 nm is reduced by substantially 90%, and wherein in the outer rim, the intensity of the wavelengths between 420 nm and 470 nm is not substantially reduced.

10. (Original) The device according to claim 8, wherein in the central portion, the intensity of wavelengths between 420 nm and 470 nm is reduced by substantially 50%.

11. (Original) The device according to claim 10, wherein in the outer rim, the intensity of the wavelengths between 420 nm and 470 nm is not substantially reduced.

12. (Currently Amended) The device according to claim 1, wherein the light source ~~produces~~ is configured to produce light having wavelengths between 420 nm and 470 nm, and wherein the spectral filter reduces the intensity of the light emitted by the light source by between substantially 0% and 90%.

13. (Original) The device according to claim 1, wherein the spectral filter has a disk-like shape with a variable reduced-light intensity illumination region.

14. (Original) The device according to claim 1, wherein the spectral filter is adapted to be mechanically moved into and out of the illuminating beam of the device.

15. (Previously Presented) The device according to claim 14, wherein the illuminating beam is adapted to be projected through the objective and onto a specimen.

16. (Original) The device according to claim 1, wherein the spectral filter defines an x, y plane, and wherein the spectral filter is adapted to be moved horizontally along its x, y plane.

17. (Original) The device according to claim 16, wherein the spectral filter is adapted to be vertically displaced along the illuminating beam.

18. (Original) The device according to claim 16, wherein the spectral filter is adapted to be moved so that the size of the specific region can be altered.

19. (Original) The device according to claim 18, wherein the movement of the spectral filter can be controlled electronically or manually.

20. (Original) The device according to claim 1, wherein the spectral filter defines an (x, y) plane which is non-normal to the illuminating beam thereby causing a varying degree in light intensity reduction across the spectral filter with respect to the objective.

21. (Original) The device according to claim 1, wherein the spectral filter is any one or more of a thin film, an LCD, and an electrochromic film.

22. (Original) The device according to claim 1, wherein the optical device is a surgical microscope.

23. (Previously Presented) The device according to claim 15, further comprising: a control circuit configured to control spatial displacement of the spectral filter.

24. (Canceled)

25. (Currently Amended) The device according to claim 1, wherein the spectral filter is movable ~~in a~~ in an up-and-down direction between the light source and the main objective, along a path of the illuminating beam.

26. (New) A surgical microscope comprising:

an optical device housing comprising:

a light source emitting light along an illuminating beam having a two-dimensional cross-sectional area;

a main objective;

a spectral filter that is configured to be positioned between the light source and the main objective, wherein the spectral filter is:

(a) adapted to reduce, without eliminating, the intensity of the light emitted by the light source in a specific region, the specific region being a subsection of the two-dimensional cross-sectional area of the illuminating beam; and

(b) configured to be displaced vertically and/or horizontally when positioned between the light source and the main objective; and

a control circuit configured to control the vertical and/or horizontal displacement of the spectral filter.

27. (New) The microscope according to claim 26, wherein the reduction of the light intensity by the spectral filter is wavelength-dependent.

28. (New) The microscope according to claim 26, wherein the reduction of the light intensity by the spectral filter is intensity-dependent.

29. (New) The device according to claim 28, wherein the reduction of the light intensity by the spectral filter is also wavelength-dependent.

30. (New) The microscope according to claim 26, wherein at least one region of the spectral filter is configured to absorb a portion of the intensity produced by a specific wavelength λ which is in a range selected from the group consisting of the wavelengths from 420 to 470 nm, wavelengths below 400 nm, wavelengths injurious to a human's retina, and wavelengths injurious to a human's cornea.

31. (New) The microscope according to claim 27, wherein the spectral filter is configured to absorb a portion of the light being transmitted by the light source having at least one wavelength, and wherein for each wavelength, a portion of which is absorbed, absorption edges are defined between the specific region and the remainder of the cross-sectional area of the illuminating beam.